

# INTERNATIONAL SEARCH REPORT

Intern. Application No  
PCT/GB2005/000608

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G03F7/20 H01S3/00 G02B3/00 H05G2/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G03F H01S G02B H05G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, INSPEC, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 601 485 A (EASTMAN KODAK COMPANY) 15 June 1994 (1994-06-15)	1-3, 18-23
Y	abstract; figures 1-9 column 1 - column 12	16,17
X	EP 1 376 198 A (HAMAMATSU PHOTONICS K. K.) 2 January 2004 (2004-01-02)	1-3, 18-23
A	abstract; figure 3 paragraph [0019] - paragraph [0020]	16,17
X	WO 02/19781 A (POWERLASE LIMITED; TAYLOR, ALAN, G; KLUG, DAVID, R; MERCER, IAN, P; AL) 7 March 2002 (2002-03-07)	1-3
A	cited in the application abstract	18-23

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

25 July 2005

Date of mailing of the international search report

17. 10. 05

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 424 404 B1 (JOHNSON KENNETH C) 23 July 2002 (2002-07-23)	1-3
A	abstract; figures 3,4 column 3, lines 15,FF.	18-23
A	----- WO 99/38046 A (BURGER, ROBERT, J) 29 July 1999 (1999-07-29) the whole document	1-3, 18-23
X	----- US 6 384 981 B1 (HAUSCHILD DIRK) 7 May 2002 (2002-05-07)	1-3
A	abstract; figures 1,3 the whole document	18-23
X	----- US 2003/052105 A1 (NAGANO KAZUHIKO ET AL) 20 March 2003 (2003-03-20)	1-3
A	the whole document	18-23
X	----- US 2003/161375 A1 (FILGAS DAVID M ET AL) 28 August 2003 (2003-08-28)	1-3
A	abstract the whole document	18-23
X	----- US 5 802 092 A (ENDRIZ ET AL) 1 September 1998 (1998-09-01)	1-3
A	abstract; figure 1	18-23
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X	----- US 5 369 659 A (FURUMOTO ET AL) 29 November 1994 (1994-11-29)	1-3
A	the whole document	18-23
X	----- US 5 027 359 A (LEGER ET AL) 25 June 1991 (1991-06-25)	1-3
A	column 3, lines 40,FF; figures 1,3,6 column 6, lines 38,FF column 8, lines 3,FF the whole document	18-23
X	----- US 5 861 992 A (GELBART ET AL) 19 January 1999 (1999-01-19)	1-3
A	abstract the whole document	18-23
X	----- US 5 491 707 A (RIEGER ET AL) 13 February 1996 (1996-02-13)	1-3
A	abstract the whole document	18-23
Y	----- EP 0 858 249 A (HITACHI, LTD) 12 August 1998 (1998-08-12)	16,17
A	abstract the whole document	1-3, 18-23
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	RYMELL L ET AL: "Liquid-jet target laser-plasma sources for EUV and X-ray lithography" MICROELECTRONIC ENGINEERING, ELSEVIER PUBLISHERS BV., AMSTERDAM, NL, vol. 46, no. 1-4, May 1999 (1999-05), pages 453-455, XP004170761 ISSN: 0167-9317 abstract	16,17
A	the whole document	1-3, 18-23
X	----- DELFYETT P J ET AL: "Novel WDM-TDM semiconductor sources for optical communications and signal processing" LASERS AND ELECTRO-OPTICS SOCIETY ANNUAL MEETING, 1998. LEOS '98. IEEE ORLANDO, FL, USA 1-4 DEC. 1998, PISCATAWAY, NJ, USA, IEEE, US, vol. 1, 1 December 1998 (1998-12-01), pages 73-74, XP010317305 ISBN: 0-7803-4947-4	4,7-9
A	the whole document	5,6, 10-15
X	----- SPIRIT D M ET AL: "OPTICAL TIME DIVISION MULTIPLEXING: SYSTEMS AND NETWORKS" IEEE COMMUNICATIONS MAGAZINE, IEEE SERVICE CENTER. PISCATAWAY, N.J, US, vol. 32, no. 12, 1 December 1994 (1994-12-01), pages 56-62, XP000489197 ISSN: 0163-6804	4,7-9
A	the whole document	5,6, 10-15
X	----- EP 0 814 550 A (TRW INC) 29 December 1997 (1997-12-29)	4,7-9
A	claim 6	4,6, 10-15
X	----- US 5 543 251 A (TAYLOR ET AL) 6 August 1996 (1996-08-06)	4,7-9
A	the whole document	4,6, 10-15
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## Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-3, 16-23

An apparatus for focusing at least two laser beams onto the same focal point, and its utilisation.

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2. claims: 4-15

An apparatus and the associated method for multiplexing laser beams with temporal interleaving.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2005/000608

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